Effect of Entrepreneurial Orientation on Enterprise Performance: Basis for Microenterprise Community Mobile App Development

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Abstract

Earlier studies consider entrepreneurial orientation and entrepreneurial competencies as essential factors in achieving better enterprise performance. This research investigated the effect of entrepreneurial orientation in terms of (a) creativity and innovativeness, (b) risk-taking propensity, (c) proactiveness, and (d) autonomy on entrepreneurial competencies and enterprise performance. The respondents of this study were the micro-enterprise business owners who operate in Lipa City. This study utilized a quantitative research approach with a descriptive and causal research design method. Multiple regression was used to analyze the results. The findings revealed that entrepreneurial orientation significantly affects micro-enterprise performance. All the four dimensions of entrepreneurial orientation such as creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy significantly predict enterprise performance and entrepreneurial competencies. Further, entrepreneurial competencies significantly and partially mediate the relationship between entrepreneurial orientation and micro-enterprise performance. This study recommends the development of a mobile application platform specifically designed for the micro-enterprise community. The goal of the mobile application platform is to influence the micro-enterprise business owners in Lipa City, Batangas to grow their understanding of the importance of developing entrepreneurial orientation and entrepreneurial competencies to achieve better enterprise performance.

Keywords: entrepreneurial competencies; enterprise performance; entrepreneurial orientation; creativity and innovativeness; risk-taking propensity; proactiveness; autonomy; micro-enterprise

1. Introduction

Pandemic is one of the situations that are hard to predict and changes people's lives including the change in business activities globally, regionally, and across the country. No community or society is spared from the negative effects of a pandemic. Typically, every country will take its own swift action to control the situation by implementing mobility restrictions that obviously disrupt households and businesses as well. The coronavirus disease 2019 (Covid-19) pandemic has triggered the government to impose policies restricting people's movements affecting economic activities. The impact of the mobility restriction is more significant among micro-enterprises as it affects current and future business performance (Fabeil, Phazim, & Langgat, 2020). In the Philippines, micro-enterprises are made up of 88.5% of establishments and approximately employ 28.9% of total private-sector employees (Rappler, 2020).

The Covid-19 has struck down businesses all over the country including the micro-enterprises. Some business owners applied for a capital loan through the Department of Trade and Industry (DTI) to seek assistance from the government, but it was declined due to insufficient funds (Rappler, 2020). Asian Development Bank (ADB) conducted a survey on MSMEs in the country from March to April 2020, which revealed that the imposed quarantine restrictions had a significant impact on business activity. Based on the survey, there are 65.9% of firms temporarily shut down their business of which majority are micro-enterprises (71.2%) (ADB, 2020). According to the Department of Trade and Industry (DTI), in March 2021, the percentage of closed businesses was 4.3%, while businesses in partial operation were 39.3%. Businesses that are in full operation were 56.4% and in June 2021, 53.8% of companies still reported a decline in sales (PNA, 2021).

In the Philippines, micro-enterprises are categorized as businesses whose total assets value is not more than 3 million pesos (P&L Law, 2020) and that employ nine people or less (Angeles, Calara, & de Guzman, 2019). According to the Department of Trade and Industry (DTI), as of 2020, there is a total of 957,620 business enterprises operating in the Philippines as recorded by the Philippine Statistics Authority (PSA), of which 952,969 (99.51%) are micro, small and medium enterprises (MSMEs). The majority of the MSME establishments are micro-enterprises which have 850,127 (88.77%) and the majority can be found in the National Capital Region (NCR) which has 201,123 (21.10%) followed by Region 4-A (CALABARZON) which has 139,363 (14.62%). Lipa City is one of the cities that make up CALABARZON, which is the second region that has the highest share of MSMEs in the country. Lipa City is situated in the southwestern part of Luzon that has 72 barangays (13 urban and 59 rural) in the heart of Batangas Province (COA, 2020). The major income sources in Lipa City include manufacturing, services, and retail industries (Malaluan, 2019). According to DTI, there are 3,144 micro-enterprise establishments registered in Lipa City, Batangas as of September 2021. The situation in Lipa City is not totally different from other cities in the country that have experienced the adverse effects of the unexpected worldwide health crisis in the business operations and performance. There are micro-enterprise business owners in the city who continue to face difficulties on how to survive and grow their business during the uncertain future, while some have no other option but to close the business. The government has taken its effort to provide financial assistance to the micro-enterprise community such as business subsidies like the '2020 Covid-19 Rehabilitation Support Program' and tax reliefs through the 'Corporate Recovery and Tax Incentives for Enterprises (Create) Law' (The Manila Times (2021). However, despite the government's effort, it still remains the fact that the allocated budget for this community is limited and insufficient to cater to all who need it. This study aimed to propose an action plan that will influence micro-enterprise business owners to embrace a more growth mindset and cultivate a culture of lifelong learning in the field of entrepreneurship. This aims to help the micro-enterprise business owners to realize that gaining useful knowledge and skills can help improve business performance and equip them as well for resilience, survival, and be able to adapt to new normal ways of doing business.

It has been witnessed how micro-enterprises struggle in facing uncertainty during the unexpected Covid-19 health crisis that the world continues to face. The routine business transactions of micro-enterprise are highly dependent on a small number of customers (Yesmin, Aope, Faroque, Zulfiqar, Moshiul, & Hira, 2021). The government imposition of mobility restrictions during uncertain situations such as disasters (Moreno, 2021) or pandemics affects business activity (ADB,2020). It shows that micro-enterprises are more vulnerable as they have fewer resources, both in terms of financial and technical support. Therefore, the researcher would like to find an alternative means of helping the community aside from assisting them financially. This study attempted to determine how each of the four dimensions of entrepreneurial orientation such as creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy affect micro-enterprise performance. It examined the effect of entrepreneurial orientation on entrepreneurial competencies and how it affects micro-enterprise performance. Furthermore, it also examined how entrepreneurial competencies mediate the effect of

entrepreneurial orientation on micro-enterprise performance. According to Man, Lau, & Chan (2002), individuals that have competencies are able to perform challenging tasks efficiently (as cited in Al-Mamun & Fazal, 2018). Gerli, Gubitta, & Tognazzo (2011) concluded that in order to achieve excellence in the firm's performance, entrepreneurs have to develop their competencies (as cited in Al-Mamun & Fazal, 2018). Also, it has been noted by Tehseen & Ramayah, (2015) that relevant competencies the entrepreneurs possess help the success of the business as it facilitates sustainability by creating competitive advantage (as cited in Mustapha, Al Mamun, Mansori, & Balasubramaniam, 2020).

According to Fabeil et al. (2020), micro-enterprise is the major contributor to economic growth. Therefore, a business survival strategy throughout a crisis is essential for this enterprise to endure an exceedingly new traditional approach to doing business. Hence, this study aimed to propose an action plan that will help the micro-enterprise business owners' community. The action plan aims to help micro-enterprise business owners to grow entrepreneurial orientation and develop their entrepreneurial competencies. This will enable them to navigate and be more resilient to the uncertain future which is essential in achieving better enterprise performance and improving economic growth.

Micro-enterprise businesses are essential to the socioeconomic development of the country as it provides income and creates jobs to the people, especially those with low incomes (Al-Mamun & Fazal, 2018; Yesmin et al., 2021). It offers the public more affordable goods and services. Its routine business transactions are highly dependent on a small number of customers (Yesmin et al., 2021). Therefore, the proposed action plan of this study targets to take action on Sustainable Development Goals (SDG) No. 4 which is the Quality Education, and SDG No. 8 which is the Decent Work and Economic. For the SDG No. 4: Quality Education, it aims to increase the number of micro-enterprise business owners who are taking the initiatives to upgrade and learn new skills as an entrepreneur, and for the SDG No. 8: Decent Work and Economic Growth, aims to strengthen the micro-enterprise performance to help the economy as a whole as more employment can be generated and poverty can be alleviated as well. As an alternative means of helping the community aside from assisting them financially, the researcher aimed to propose an action plan that can be a basis for the Micro-Enterprise Community Mobile App development.

Related Literature

Entrepreneurial Orientation has been defined by Lumpkin & Dess (1996) as the practices, processes, and activities involving decision-making that lead to new venture (as cited in Pett & Wolff, 2016). It was originally conceptualized by Miller (1983) as the notion of entrepreneurial firm that engages in risk-taking, innovativeness, and being proactive (as cited in Pett & Wolff, 2016; Rezaei & Ortt, 2018). According to Pratono et al. (2013), entrepreneurial orientation is a factor that determines the growth of an enterprise (as cited by Okangi, 2019). Covin & Slevin (1991) mapped out the three dimensions of entrepreneurial orientation such as innovativeness, risk-taking, and proactiveness (as cited in Pett & Wolff, 2016; Krueger, 2017). Lumpkin & Dess (1996) suggested the addition of competitiveness and autonomy (as cited in Krueger, 2017). However, the entrepreneurial orientation dimensions that are widely cited by several researchers are creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy (Krueger, 2017; Al-Mamun & Fazal, 2018; Ali Khan, Rathore, & Adnan Sial, 2020). Among the five dimensions, this study will adopt the four dimensions, consisting of creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy. Competitive aggressiveness was excluded because in several studies it has been discussed that it is part of proactiveness, as the strategies being set by a business owner to become a leader in the industry is through introducing new products or services or processes ahead of its rivals (Oni, Agbobli, & Iwu, 2019; Ismail, Md Yusoff, Ab Samad, & Ahmad, E. M, 2020). It has been concluded in the study of Eze, Oladimeji, & Fayose

(2019) that competitive aggressiveness is not part of the major dimensions of entrepreneurial orientation affecting MSMEs performance.

Lack of entrepreneurial orientation in small businesses can be an enormous challenge to achieving higher firm performance (Kaluarachchige, Ab-Yajid, Kathibi, & Ferdous-Azam, 2021). In the study of Thumiki (2017), it has been found that low success/failure of entrepreneurs was mainly caused by lack of required professional business skills, followed by lack of innovation (skill related) and lack of perseverance (behavioral related). Also, the study of Angeles et. al., (2019) revealed that the inability to make use of the capital for expansion can be attributed to a lack of competitiveness and literacy. Dess & Lumpkin (2005) described creativity and innovativeness as the ability to think of new ideas and methods to create solutions to challenges and problems during uncertain situations helping the enterprises in discovering new opportunities and solutions (as cited in Al-Mamun & Fazal, 2018). It involves creativity and experimentation resulting in the creation of new products, services, and improved technological processes. The nature of innovativeness is important in understanding the entrepreneurial mindset of an individual and the changes therein (Krueger, 2017). Similarly, Ketchen & Short (2012) noted that innovativeness is an essential factor in gauging entrepreneurial orientation because "it helps firms to pursue new opportunities" (as cited in Okangi, 2019). Adam & Alarifi (2021) found that innovation practices of the enterprise have a significant impact on enterprise performance and survival.

Risk-taking is another dimension in gauging the entrepreneurial orientation which Miller (1983) described as the scale that is important in predicting entrepreneurial orientation. It is measurable using managerial competence in projecting the enterprise's willingness to commit to large and risky projects (as cited in Rezaei & Ortt, 2018). Both Lumpkin & Dess (1996) and Schillo (2011) have described risk-taking as the tendency of the firm to engage and willingness to commit substantial resources to opportunities accompanied by uncertain outcomes (as cited in Okangi, 2019). Risk-taking propensity is the ability to adapt to uncertain situations or the degree to take the risk (Ali Khan et al., 2020). Ketchen & Short (2012) noted that it helps the enterprises to engage in bold instead of cautious actions (as cited in Okangi, 2019).

Moving on, proactiveness is another key dimension of entrepreneurial orientation. Venkatraman (1989) defined proactiveness as "seeking new opportunities which may or may not be related to the present line of operations, introduction of new products and brands ahead of the competition, strategically eliminating operations which are in the mature or declining stages of the life cycle" (as cited in Rezaei & Ortt (2018). According to Antoncic & Zorn (2004), the purpose of proactiveness is to introduce new products ahead of competitors, "strategically eliminating operations that are in the declining stages of the business life cycle" (as cited in Okangi, 2019). Casillas & Moreno (2010), noted that if firms are more proactive in capturing new business opportunities it can achieve greater growth rates (as cited in Okangi, 2019).

Lastly is autonomy, in which Lumpkin & Dess (1996) suggested as the additional dimension of entrepreneurial orientation (as cited in Al-Mamun & Fazal, 2018). Autonomy has been defined as the individuals' independent action of conveying a vision or an idea allowing to demonstrate their competencies required for smoothing the path to successful entrepreneurship. In the study of Dimitratos, Liouka, & Young (2014), autonomy was found as a dimension that can capture individual entrepreneurial competencies which is indeed a necessary component of entrepreneurial orientation and a valuable resource for running a business successfully (as cited in Al-Mamun & Fazal, 2018). Undoubtedly, entrepreneurial orientation is a key factor that integrates, builds, and reconfigures the internal and external competencies to deal with the fast-changing environments among small and medium enterprises (Darwis, 2017). Ketchen & Short (2012) concluded that it is considered to be a primary concept for taking advantage of the opportunities that competitors cannot pursue which according to Sarker & Palit (2015) leads to higher growth among those enterprises exercising (as cited in Okangi, 2019).

Competency according to Man et al. (2002) refers to a method of analyzing an individual's traits that leads to task achievement or organizational success (as cited in Al-Mamun & Fazal, 2018). Entrepreneurial competencies could lead to economic development and better enterprise performance and growth. According to Mitchelmore & Rowley (2013), it consists of a specific group of traits important to successful entrepreneurship (as cited in Al-Mamun et al., 2016). The development of entrepreneurial competencies is vital to being a successful entrepreneur as they affect the performance of small enterprises (Kaluarachchige et al., 2021). Moreover, entrepreneurial competencies according to Hee & Daisy (2013) play a critical part in the performance and success of any enterprise (as cited in Mustapha et al., 2020).

Education and training are found to be critical success factors for micro-enterprises. The performance of the enterprises must be higher if the entrepreneurs are well educated and are properly trained (Alom, Abdullah, Moten, & Ferdous Azam, 2016). It has been revealed in the study by Moreno (2021) that to increase the rate of survival and to encourage the growth and development of small business owners, it is essential to foster resilience education and enhance characteristics among entrepreneurs. The government and other institutions may enable business owners to discover their skills and abilities rather than counting on funding to survive (Angeles et al., 2019). According to Asian Development Bank (ADB) report, enterprises are exploring a new post-COVID-19 business model that avoids physical contact such as shifting to digital transactions and getting support in upgrading skills to remain competitive under the new normal (ADB, 2020). With the advances in technology, the use of mobile devices has increased rapidly. This has led to the implementation of mobile platforms that enable mobile information dissemination that provides information seekers with a variety of advantages such as self-service, limitless access, and timesaving (Shonhe & Jain, 2017).

Conceptual Framework

In this paper, the research framework was adapted from the Asia Pacific Journal of Innovation and Entrepreneurship by Al-Mamun & Fazal (2018) entitled "Effect of entrepreneurial orientation on competency and micro-enterprise performance". Under this framework, the study investigated the effect of entrepreneurial orientation such as creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy on entrepreneurial competency and performance among micro-enterprises in Kelantan, Malaysia. This is illustrated in Figure 1.

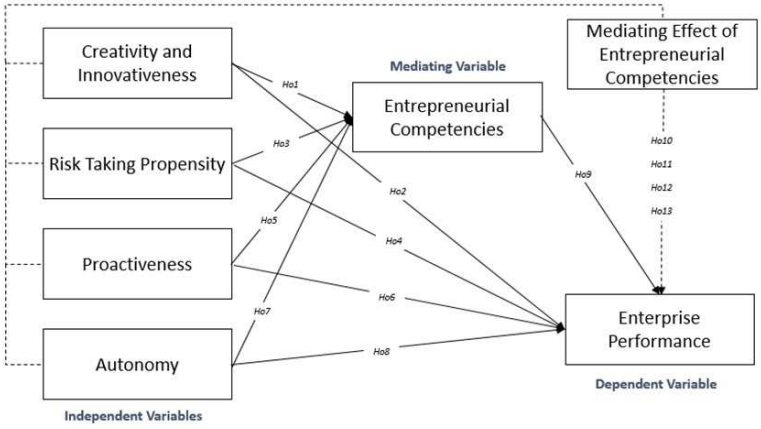

Figure 1. Conceptual Framework
Source: Effect of entrepreneurial orientation on competency and micro-enterprise performance (Al-Mamun & Fazal, 2018)

Their results revealed that autonomy, proactiveness, and creativity and innovativeness are the three out of four dimensions of entrepreneurial orientation that had a positive effect on entrepreneurial competencies. It revealed that autonomy is the dimension of entrepreneurial orientation that had a positive effect on enterprise performance. Likewise, entrepreneurial competencies also had a positive effect on enterprise performance. Moreover, the study revealed that entrepreneurial competencies had a mediating effect on the relationships between autonomy, proactiveness, creativity and innovativeness, and enterprise performance.

Operational Framework

While the study of Al-Mamun & Fazal (2018) was conducted in Malaysia, this study was conducted in the Philippines. Similar to the study conducted by Al-Mamun & Fazal (2018), this research paper examined the effect of entrepreneurial orientation such as creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy on entrepreneurial competency and enterprise performance, and it was conducted among the micro-enterprise in Lipa City, Batangas Philippines. This study was guided by the operational framework stated in Figure 2.

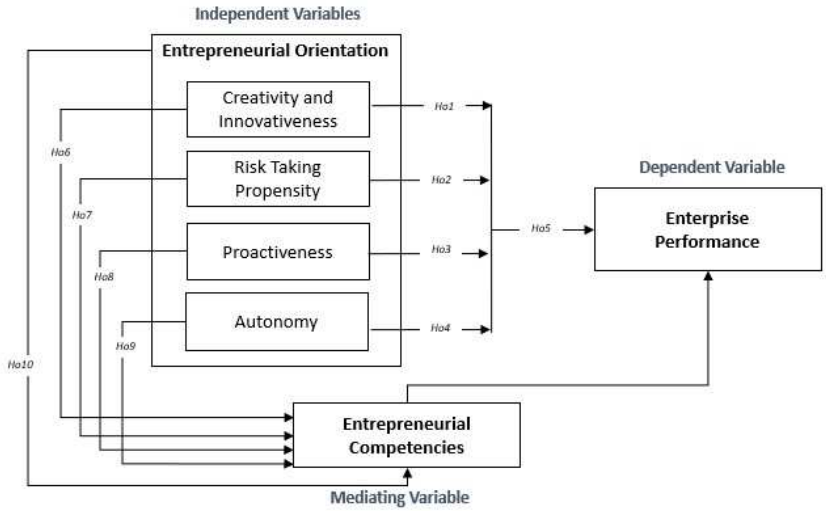

Figure 2. Operational Framework

Objectives

This study determined the effect of creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy on entrepreneurial competencies. Specifically, the study aimed to achieve the following:

1. to determine if entrepreneurial orientation in terms of creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy significantly affect enterprise performance;
2. to determine if entrepreneurial orientation as a whole significantly affects enterprise performance;
3. to determine if entrepreneurial orientation in terms of creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy significantly affect entrepreneurial competencies;
4. to determine if entrepreneurial competencies significantly mediate the effect of entrepreneurial orientation on enterprise performance

Hypotheses

To address the need of the study, the following hypotheses were tested and measured by the statistical model.

H_{o1}: Creativity and Innovativeness has no significant effect on Enterprise Performance
H_{o2}: Risk-Taking Propensity has no significant effect on Enterprise Performance
H_{o3}: Proactiveness has no significant effect on Enterprise Performance
H_{o4}: Autonomy has no significant effect on Enterprise Performance
H_{o5}: Entrepreneurial Orientation has no significant effect on Enterprise Performance
H_{o6}: Creativity and Innovativeness have no significant effect on Entrepreneurial Competencies
H_{o7}: Risk-Taking Propensity has no significant effect on Entrepreneurial Competencies
H_{o8}: Proactiveness has no significant effect on Entrepreneurial Competencies
H_{o9}: Autonomy has no significant effect on Entrepreneurial Competencies
H_{o10}: Entrepreneurial Competencies do not significantly mediate the effect of Entrepreneurial Orientation on Enterprise Performance

2. Methodology

The study utilized a quantitative research approach with a descriptive and causal research design method. The respondents of this study were the micro-enterprise business owners who operate in Lipa City. Micro-enterprises have nine employees or less and have a capital of fewer than three million pesos. The researcher used G-Power version 3.1 to determine the sample size. With an effect size of 0.15, alpha of .05, and power of 0.90, the sample size is 108 to test the model with four predictors. The data were collected from micro-enterprise business owners through a survey that was administered both online and offline. An online questionnaire was prepared through Google Form, while an offline questionnaire was prepared through MS Word format.

A message containing the link to the online questionnaire has been shared through online messaging applications, which contain a request to fill out the questionnaire and an explanation of its purpose. On the one hand, the offline questionnaire was printed, and the researcher did a walk-in to distribute paper surveys to the respondents while strictly following the safety protocols and being able to conduct face-to-face data collection in which the participants were given five days to complete the questionnaire. This study required an offline survey to target respondents where sending the questionnaire via email was not feasible due to the unavailability of email addresses. Furthermore, conducting an offline survey has allowed micro-enterprise business owners who were not active in social media to participate in the study.

The questionnaire used in this research was adapted from the study of Al-Mamun & Fazal (2018). However, the researcher provided a translation of the questionnaire with the help of a professional from the English language into the Filipino language so the respondents could better understand the questions. A five-point Likert scale was used for all independent variables, and a seven-point Likert scale was used for dependent variables. Creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy are the independent variables in which a five-point Likert scale (from “1-Strongly Disagree” to “5-Strongly Agree”) was used to capture respondents’ perception of entrepreneurial orientation dimensions. Enterprise performance is a dependent variable in which a seven-point Likert scale (from “1-Very Poor” to “7-Very Good”) was used to capture the respondents’ perception of customer satisfaction, competitive position, customer retention, sales growth, and return of investment. Similarly, a seven-point Likert scale (from “1-Strongly Disagree” to “7-Strongly Agree”) was used to respond to entrepreneurial competency and capture the

respondents' perception of trustworthiness, ability to negotiate with others, ability to solve problems, and management ability. The questionnaire consisted of four sections that covered:

1. The demographic profile of the business owner
2. Entrepreneurial orientation that has four sub-sections for each of the dimension (a) creativity and innovativeness, (b) risk-taking propensity, (c) proactiveness, and (d) autonomy.
3. Entrepreneurial competencies
4. Enterprise performance.

Table 1
Questionnaire Specification

Part	Variables	Item No.	Response Category
I.	Creativity and Innovativeness	1 to 7	1 = Strongly Disagree 2 = Disagree 3 = Neutral/Uncertain 4 = Agree 5 = Strongly Agree
II.	Risk-Taking Propensity	1 to 5	1 = Strongly Disagree 2 = Disagree 3 = Neutral/Uncertain 4 = Agree 5 = Strongly Agree
III.	Proactiveness	1 to 6	1 = Strongly Disagree 2 = Disagree 3 = Neutral/Uncertain 4 = Agree 5 = Strongly Agree
IV.	Autonomy	1 to 5	1 = Strongly Disagree 2 = Disagree 3 = Neutral/Uncertain 4 = Agree 5 = Strongly Agree
V.	Entrepreneurial Competencies	1 to 5	1 = Strongly Disagree 2 = Disagree 3 = Somewhat Disagree 4 = Neutral/Uncertain 5 = Somewhat Agree 6 = Agree 7 = Strongly Agree
VI	Enterprise Performance	1 to 5	1 = Very Poor 2 = Poor 3 = Somewhat Poor 4 = Neutral/Uncertain 5 = Somewhat Good 6 = Good 7 = Very Good

Cronbach's alpha was used in this study to measure the instrument's reliability. Reliability means the internal accuracy of the responses, and the Cronbach's alpha reliability co-efficient normally ranges between 0-1. This will indicate whether the survey is a proper tool to measure the hypothesis or not. If the Cronbach's alpha coefficient is closer to 1.00, it indicates high internal consistency of the items in the scale. George & Mallery (2003) provided the following rules: alpha that is above 0.90 is Excellent; alpha that is above 0.80 is Good; alpha that is above 0.70 is considered Acceptable; alpha that is above 0.60 is Questionable; alpha that is above 0.50 is Poor; and alpha that is lower than 0.50 is Unacceptable (as cited in Aydin, 2016). Shown in

Table 2 was the result of the Cronbach Alpha in this study, and the analysis revealed that the values for all the variables are greater than 0.70, confirming that all items are reliable.

Table 2
Cronbach Alpha Findings

Part	Variables	Cronbach Alpha	Interpretation
I.	Creativity and Innovativeness	0.777	Acceptable
II.	Risk-Taking Propensity	0.853	Good
III.	Proactiveness	0.726	Acceptable
IV.	Autonomy	0.757	Acceptable
V.	Entrepreneurial Competencies	0.845	Good
VI.	Enterprise Performance	0.843	Good
VII.	Entrepreneurial Orientation as a Whole	0.883	Good

Additionally, as shown in Table 3, averages were calculated for the five-point Likert scale to determine the tendency of the composite scores. This research also used frequency and percentage to describe the profile variables. It also used simple and multiple regression to analyze the results of independent, mediating, and dependent variables. This study conducted simple regression analysis to test the direct effects or the paths among the variables to confirm if all the relationships were significant. Moreover, this study conducted multiple regression analysis to test the mediation effect called indirect effect and to further determine the type of mediation. Regression analysis was used because "it is a statistical tool to investigate the relationships between variables, and it helps to estimate the quantitative effect of the causal variables upon the variable that they influence". According to (Sykes, 1993), *p-value* of less than .05 indicates a significant effect (as cited in Okangi, 2019).

Table 3
Mean Interpretation of Likert Scales

Mean Range	Response Category	Interpretation
1.00 – 1.79	Strongly Disagree	Very Low
1.80 – 2.59	Disagree	Low
2.60 – 3.39	Neutral/Uncertain	Moderate
3.40 – 4.19	Agree	High
4.20 – 5.00	Strongly Agree	Very High

3. Results and Discussion

Descriptive

Respondents' Perception of Entrepreneurial Orientation

Table 4 presents the descriptive statistics on the respondents' perception of their entrepreneurial orientation in terms of creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy. The respondents generally perceived creativity and innovativeness and risk-taking propensity as high. Creativity

and innovativeness' composite mean score of 4.17 implies that respondents have a high orientation on being creative and innovative. Further, risk-taking propensity's composite mean score of 4.12 reveals that respondents practiced risk-taking propensity significantly.

Table 4
Perception of Entrepreneurial Orientation Dimensions

Perception of Entrepreneurial Dimension in terms of	Composite Mean Score	Interpretation
Creativity and Innovativeness	4.17	High
Risk-Taking Propensity	4.12	High
Proactiveness	4.21	Very High
Autonomy	4.24	Very High

Notes: 5-point Likert scale

Based on Table 4, respondents generally perceived their orientation on proactiveness as very high with composite mean score of 4.21. This indicates that proactiveness is extensively practiced by the respondents. Moreover, among the four entrepreneurial orientation dimensions, it revealed that highest means is observed for autonomy with a composite mean score of 4.24. This implies that autonomy is a very high entrepreneurial orientation dimension that is greatly practiced by the respondents.

Perception of Entrepreneurial Competencies and Enterprise Performance

Table 5 presents the descriptive statistics on the respondents' perception of entrepreneurial competencies and enterprise performance. Entrepreneurial competencies gained a composite mean of 5.9, which indicates that respondents are highly competent. Further, enterprise performance gained a composite mean score of 6.1, indicating a high performance.

Table 5
Perception of Entrepreneurial Competencies and Enterprise Performance

Perception in terms of	Composite Mean Score	Interpretation
Entrepreneurial Competencies	5.9	High
Enterprise Performance	6.1	High

Notes: 7-point Likert scale

Effect of Entrepreneurial Orientation dimensions on Enterprise Performance

Table 6 presents information on entrepreneurial orientation in terms of creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy as predictor variables of enterprise performance. The R2 of 0.430 indicates that 43% of the variance in enterprise performance can be predicted by dimensions of entrepreneurial orientation. Also, the autonomy dimension was revealed to have the greatest contribution to enterprise performance ($\beta = 0.232$).

Table 6
Effect of Entrepreneurial Orientation in terms of Creativity and Innovativeness, Risk-Taking Propensity, Proactiveness, and Autonomy on Enterprise Performance

	B Coefficients	Standardized Coefficients Beta	t-value	p-value	Interpretation
Constant	2.173		*4.850*	*.000*	
Creativity and Innovativeness	.256	.221	*2.417*	*.017*	*Significant*
Risk-Taking Propensity	.196	.195	*2.166*	*.033*	*Significant*
Proactiveness	.248	.215	*2.096*	*.038*	*Significant*
Autonomy	.230	.232	*2.584*	*.011*	*Significant*
$R^2 = 0.430$		F-value = 19.392			P-value =.000

Dependent Variable: Enterprise Performance

The results shown in Table 6 revealed that creativity and innovativeness positively predict enterprise performance with a $\beta = 0.256$. This indicates that a higher level of creativity and innovativeness may lead to better enterprise performance. Such effect is significant at *p-value* < 0.05. This means that creativity and innovativeness significantly contribute to the improvement of enterprise performance. This finding agrees with earlier studies by Oni et al. (2019) that creativity and innovativeness have a positive and statistically significant effect on enterprise performance. This indicates that being able to adapt to innovative practices and doing things creatively can help the enterprise to discover new opportunities and develop new ways to improve the existing products and services that can help to increase the enterprise's performance.

Also, the results showed that risk-taking propensity positively predicts enterprise performance with a $\beta = 0.196$. This indicates a higher level of risk-taking propensity may lead to better enterprise performance. Such effect is significant at *p-value* < 0.05. This finding concurs with earlier studies by Olubiyi, Egwakhe, Amos, & Ajayi (2019) and Oni et al. (2019) that risk-taking propensity has a positive and statistically significant effect on enterprise performance. This implies that willingness to invest in risk-taking practices and capabilities can help improve enterprise performance.

The results also revealed that proactiveness positively predicts enterprise performance with a $\beta = 0.248$. This indicates that the more proactiveness the person is, the better the enterprise performance will be. Such effect is significant at *p-value* < 0.05. This finding is in line with previous studies by Oni et al. (2019) and Olubiyi et al. (2019) that proactiveness has a positive and statistically significant effect on enterprise performance. This indicates that being able to respond proactively to the dynamism in the business environment, the ability to anticipate the needs of the market, and having a strong tendency to introduce new products and services can help to positively improve the performance of the enterprise.

Additionally, the findings also showed that autonomy positively predicts enterprise performance with a $\beta = 0.230$. This indicates that enterprise performance increases with the increase in autonomy. Such effect is significant at *p-value* < 0.05. This finding is consistent with earlier studies by Al-Mamun & Fazal (2018), Eze et al. (2019), and Oni et al. (2019) that autonomy has a positive and statistically significant effect on enterprise performance. This indicates that autonomy significantly contributes to the improvement of enterprise performance. This implies that practicing autonomous activities and having the ability and will to be self-directed to pursue novel ideas could improve enterprise performance.

Following table 6, the estimated regression model for Enterprise Performance is:

$$EP = 2.173 + 0.256\ CI + 0.196\ RTP + 0.248\ P + 0.230\ A + \varepsilon$$

where EP is Enterprise Performance
CI is Creativity and Innovativeness

RTP is Risk-taking Propensity
P is Proactiveness
A is Autonomy

The regression equation (EP = 2.173 + 0.256 CI + 0.196 RTP + 0.248 P + 0.230 A) shows that measures of entrepreneurial orientation have an effect on enterprise performance. A 1-unit increase in creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy result in a 0.256, 0.196, 0.248, and 0.230 percentage change increase in enterprise performance respectively. This means that the higher the entrepreneurial orientation the better the enterprise performance will be. Moreover, these effects are statistically significant at *p-values* < 0.05. Overall, the model is significant (f-value = 19.392, *p-value* = .000).

Effect of Entrepreneurial Orientation on Enterprise Performance

Table 7 presents information on entrepreneurial orientation as a predictor variable of enterprise performance. The R2 of 0.428 indicates that 42.8% of the variance in enterprise performance can be predicted by entrepreneurial orientation.

Table 7
Effect of Entrepreneurial Orientation on Enterprise Performance

	B Coefficients	p-value	Interpretation
Constant	2.205	*0.000*	
Entrepreneurial Orientation	0.923	*0.000*	*Significant*
$R^2 = 0.428$	F-value = 79.181		P-value =.000

Dependent Variable: Enterprise Performance

The estimated regression model for Enterprise Performance is:

$$EP = 2.205 + 0.923\ EO + \varepsilon$$

The regression equation (EP = 2.205 + 0.923 EO) shows that entrepreneurial orientation as a whole significantly affects Enterprise Performance with a *p-value* = 0.000. A 1-unit increase in entrepreneurial orientation results in a 0.923 percentage change increase in enterprise performance. This indicates that enterprise performance becomes better with the increase in entrepreneurial orientation. This finding agrees with earlier studies by Lisboa, Skarmeas & Saridakis (2016), Olubiyi et al. (2019), and Oni et al. (2019) that entrepreneurial orientation has a positive and statistically significant effect on enterprise performance. This means that entrepreneurial orientation significantly contributes to the improvement of the enterprise's performance. The firm's development of entrepreneurial orientation can eventually lead to better enterprise performance.

Effect of Entrepreneurial Orientation on Entrepreneurial Competencies

Table 8 presents information on entrepreneurial orientation in terms of creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy as predictor variables of entrepreneurial competencies. The R2 of 0.472 indicates 47.2% of the variance in entrepreneurial competencies can be predicted by dimensions of entrepreneurial orientation. Also, creativity and innovativeness dimension was revealed to have the greatest contribution to entrepreneurial competencies (β = 0.322).

Table 8
Effect of Entrepreneurial Orientation on Entrepreneurial Competencies

	B Coefficients	Standardized Coefficients Beta	t-value	p-value	Interpretation
Constant	0.592		*1.072*	*.000*	
Creativity and Innovativeness	0.478	0.322	*3.665*	*.000*	*Significant*
Risk-Taking Propensity	.258	.200	*2.309*	*.023*	*Significant*
Proactiveness	.300	.203	*2.052*	*.043*	*Significant*
Autonomy	.228	.180	*2.083*	*.040*	*Significant*
$R^2 = 0.472$		F-value = 23.048			P-value =.000

Dependent Variable: Entrepreneurial Competencies

The results shown in Table 8 revealed that creativity and innovativeness positively predict entrepreneurial competencies with a $\beta = 0.478$. This indicates that entrepreneurial competencies increase with the increase in creativity and innovativeness. Such effect is significant at *p-value* < 0.05. Meaning, creativity and innovativeness significantly contributes to the development of entrepreneurial competencies. This finding agrees with earlier studies by Al-Mamun & Fazal (2018) and Ali Khan et al. (2020) that creativity and innovativeness have a positive and statistically significant effect on entrepreneurial competencies. This indicates that the business owner's ability to think of new ideas and engage in new methods in solving business problems rather than the conventional can help the enterprise to discover new opportunities and develop specific competencies.

Also, the results showed that risk-taking propensity positively predicts entrepreneurial competencies with a $\beta = 0.258$. This indicates that if risk-taking propensity increases, the entrepreneurial competencies increase as well. Such effect is significant at *p-value* < 0.05. This means that risk-taking propensity significantly contributes to the improvement of entrepreneurial competencies. This finding is not in line with earlier studies by Al-Mamun & Fazal (2018) in which risk-taking propensity has a positive but statistically insignificant effect on entrepreneurial competencies.

Additionally, the results also revealed that proactiveness positively predicts entrepreneurial competencies with a $\beta = 0.300$. This indicates that with the increase in proactiveness, the entrepreneurial competencies increase as well. Such effect is significant at *p-value* < 0.05. This means that proactiveness significantly contributes to the improvement of entrepreneurial competencies. This finding is in line with previous studies by Al-Mamun & Fazal (2018) and Ali Khan et al. (2020) that proactiveness has a positive and statistically significant effect on entrepreneurial competencies.

Moreover, the findings also showed that autonomy positively predicts entrepreneurial competencies with a $\beta = 0.228$. This indicates that entrepreneurial competencies increase with the increase in autonomy. Such effect is significant at *p-value* < 0.05. This means that autonomy significantly contributes to the improvement of entrepreneurial competencies. This finding is consistent with earlier studies by Al-Mamun & Fazal (2018) that autonomy has a positive and statistically significant effect on entrepreneurial competencies.

Following table 11, the estimated regression model for Entrepreneurial Competencies is:

$$EC = 0.592 + 0.478\ CI + 0.258\ RTP + 0.300\ P + 0.228\ A + \varepsilon$$

The regression equation ($EC = 0.592 + 0.478\ CI + 0.258\ RTP + 0.300\ P + 0.228\ A$) shows that measures of entrepreneurial orientation have an effect on entrepreneurial competencies. A 1-unit increase in creativity and innovativeness, risk-taking propensity, proactiveness and autonomy result may result to a percentage change

increase of 0.478, 0.258, 0.300 and 0.228 in entrepreneurial competencies respectively. This means that the higher the entrepreneurial orientation the more that entrepreneurial competencies will improve. Moreover, these effects are statistically significant at a *p-value* < 0.05. Overall, the model is significant (f-value = 23.048, *p-value* = .000).

Mediating Effect

As shown in Table 9, the significant paths represent the proposed associations among research constructs which were all supported by the data. The results showed that EO has a direct significant effect on EP (α = 0.923, t-value = 8.898, *p-value* < 0.05) and EC on EP (α = 0.496, t-value = 8.466, *p-value* < 0.05), as well as EO on EC (α = 1.226, t-value = 9.485, *p-value* < 0.05). This finding was consistent with earlier studies by Ali Khan et al., 2020). The direct significant effect of EO on EP and EC on EP indicates that the enterprise performance increase with the increase in entrepreneurial orientation and when the entrepreneurial competencies increase, the performance of the micro-enterprise also increases. Similarly, the direct significant effect of EO on EC indicates that when entrepreneurial orientation is enhanced, the entrepreneurial competencies increase as well.

Table 9
Mediating Role of Entrepreneurial Competencies in the Relationship between Entrepreneurial Orientation and Enterprise Performance

Research Proposed Paths	Coefficient Value	t-value	p-value	Empirical Value
EO -> EP	0.923	8.898	0.000	Significant
EC -> EP	0.496	8.466	0.000	Significant
EO -> EC	1.226	9.485	0.000	Significant
EO -> EP	0.583	4.387	0.000	Significant
EC -> EP	0.277	3.769	0.000	Significant

EO-Entrepreneurial Orientation; EC-Entrepreneurial Competencies; EP-Enterprise Performance

Based on the Sobel Test results shown in Table 10, the mediating effect of entrepreneurial competencies was studied by examining both the direct and indirect effects of entrepreneurial orientation on enterprise performance with the effects of a mediating variable, entrepreneurial competencies. Entrepreneurial orientation was found to have a direct (α = 0.583) effect on enterprise performance while the mediating variable entrepreneurial competencies has an indirect effect of 0.340 resulting in a total effect of α=0.923. The indirect effect is significant at a *p-value* < 0.05. Thus, the results revealed that entrepreneurial competencies partially mediate the relationship between entrepreneurial orientation and enterprise performance. This indicates that both entrepreneurial orientation and entrepreneurial competencies significantly predicts enterprise performance. This means that entrepreneurial competencies not only have a significant relationship with enterprise performance, but it also has a direct relationship between entrepreneurial orientation and enterprise performance. Additionally, the percentage of mediation is 36.79.

Table 10
Sobel Test

Hypothesis	From	Mediation	To	Direct Effect	Indirect Effect	Total Effect	Mediation Percentage (Indirect Effect/Total Effect)	P value
H_{o10}	EO	EC	EP	0.583	0.340	0.923	36.79	0.0005

a. Dependent Variable: Enterprise Performance

The indirect effect of entrepreneurial competencies on the performance of the micro-enterprise indicates that entrepreneurial competencies is a mediating variable of influence of entrepreneurial orientation on the performance of the micro-enterprise. The findings show that entrepreneurial orientation has an effect on the performance of the micro-enterprise that is mediated by entrepreneurial competencies. This indicates that improving entrepreneurial orientation will lead to the improvement of entrepreneurial competencies, then the stronger the entrepreneurial competencies will cause the increase in micro-enterprise performance. Therefore, entrepreneurial competencies are a mediation of the relationship between entrepreneurial orientation and micro-enterprise performance.

Conclusion

The result of this study shows that entrepreneurial orientation significantly affects micro-enterprise performance. All the four dimensions of entrepreneurial orientation such as creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy significantly predict enterprise performance with *p-values* < .05, hence Ho1, Ho2, Ho3, and Ho4 have been rejected. Further, this study revealed that entrepreneurial orientation as a whole significantly affects enterprise performance with a *p-value* < 0.001, hence Ho5 has been rejected. This study also revealed that all the four dimensions of entrepreneurial orientation such as creativity and innovativeness, risk-taking propensity, proactiveness, and autonomy significantly predict entrepreneurial competencies with all the *p-value* < .05 as well, hence Ho6, Ho7, Ho8, and Ho9 have been rejected. Moreover, entrepreneurial competencies significantly and partially mediate the relationship between entrepreneurial orientation and micro-enterprise performance, therefore Ho10 has been rejected. In summary, all the null hypotheses have been rejected. This study concludes that successful development of entrepreneurial orientation will lead to stronger entrepreneurial competencies and further lead to better performance of the micro-enterprise.

Recommendation

As a recommendation, micro-enterprise business owners' need to take an effort to improve the way they think and behave in doing business. They need to take the initiatives to equip themselves with entrepreneurial competencies that can help them to improve the enterprise performance. According to Gomera, Oreku, Apiola, & Suhonen (2017), mobile technology can be a platform to deliver learning materials and provide mobile training in micro business. Hence, this study recommends the development of a mobile application platform specifically designed for micro-enterprise community. The goal of the mobile application platform is to influence the micro-enterprise business owners in Lipa City, Batangas to grow their understanding of the importance of developing entrepreneurial orientation and entrepreneurial competencies to achieve better enterprise performance. These include orienting the micro-enterprise business owners with the importance of adapting to innovative practices and doing things creatively to discover new opportunities and develop new ways to improve the existing products and services. It will also include educating them on the importance of willingness to invest in risk-taking practices and capabilities and be able to respond proactively to the dynamism in the business environment. Additionally, it will also highlight to them the need to practice autonomous activities and have the ability and will to be self-directed to pursue novel ideas, which will all help in the betterment of the enterprises' performance. The proposed mobile application will also have a self-assessment tool that will help micro-enterprise business owners to evaluate their entrepreneurial competency levels. It will provide a modular entrepreneurship training program needed by the individual based on the result of the identified competency gaps. The mobile application can contribute to helping the business owners not only to identify the entrepreneurial competencies that require improvement but also to comprehend the need for them to improve. It will also help them to set themselves up for the growth of their business. Moreover, the mobile application will also serve as a platform for the local government in disseminating

information that is easily accessible to the micro-enterprise community. The mobile application will have links to the available government financial assistance and programs such as loan applications and registration for the upcoming events for the micro-enterprise community.

The local government may partner with the local universities in the creation of innovative projects like this that will help in the local economic development. The local universities may engage their students in the creation of the mobile application while the contents of the training materials and webinar information are to be prepared and maintained by different government agencies in Batangas like Department of Trade and Industry (DTI) and Technical Education and Skills Development Authority (TESDA). The proposed development of the mobile application platform can be a way for the local government to give a learning opportunity and to efficiently connect with the micro-enterprise community. This mobile application will help micro-enterprise business owners to understand the importance of developing and practicing entrepreneurial orientation dimensions and engaging themselves in the development of their entrepreneurial competencies. It will also help to build a growth mindset and cultivate a culture of lifelong learning among existing and aspiring micro-enterprise business owners to equip them for resilience, survival, success, and growth in running a business regardless of the economic condition. This will help to enable the micro-enterprise community to navigate and be more resilient to the uncertain future which is essential in achieving better enterprise performance and can have a lasting impact on society and economic growth. Future studies may consider investigating if entrepreneurial orientation in terms of competitive aggressiveness will have similar effect as proactiveness on enterprise performance.

Project Action Plan

Title of the Project: Mobile Application for Micro-Enterprise Community - Lipa		
Goals/Objectives: To influence the micro-enterprise business owners in Lipa City, Batangas to grow their understanding of the importance of developing entrepreneurial orientation and entrepreneurial competencies to achieve better enterprise performance.		
Timeframe: 40 weeks	Unit/Institution Responsible for the project: Government Agency on Technical Education & Training	Stakeholders: Microenterprise Community in Lipa
Project Team: Government Agency on Technical Education & Training & Local University Students		

ACTION PLAN

Activities	In-Charge	Timeline
What will be done?	*Who will do it?*	*By When? Year 2022-23*
General discussion on the Mobile Application Development Project	Government Agency on Technical Education & Training	Sep 5 – 9, 2022
Identify the project team and key stakeholders	Government Agency on Technical Education & Training	Sep 12 – 23
Determine the project scope, resources, and major tasks	Government Agency on Technical Education & Training	Sep 26 – Oct 7
Create the project schedule	Government Agency on Technical Education & Training	Oct 10 – 21
Develop the budget - staffing, training, and contingency budget	Government Agency on Technical Education & Training	Oct 24 – Nov 4
Documentation and review of the project plan	Government Agency on Technical Education & Training	Nov 7 – 18
Mobile Application Development & Creation of training materials and online seminar schedule planning	Local University Students and Government Agency on Technical Education & Training	Nov 21 – Apr
Perform system testing - ensure that the desired feature is present, and issues found are	Local University Students and Government Agency on Technical Education & Training	Apr 10 – May 5

corrected		
System Acceptance	Local University Students Government Agency on Technical Education & Training	May 8 – 12
Start the Ad campaign about the mobile application through social media platforms	Government Agency on Technical Education & Training	May 15 – 26
Enable the mobile application to the micro-enterprise community	Government Agency on Technical Education & Training	June 1, 2023

Modular Training Program

Module	Description	Duration
Creativity and Innovativeness		
Module 1	Strategies on new products and services introduction.	2 hours
Module 2	Steps and techniques on how to fix problems in the business and create an opportunity from those problems.	2 hours
Module 3	Ways on how to maintain sense of control during tough times.	2 hours
Module 4	Ways on how to adapt to new, trending, and creative business ideas.	2 hours
Module 5	Key approaches on how to generate new ideas and adopt a creative approach for the business.	2 hours
Module 6	Importance of innovation for the long-term success of the business.	2 hours
Module 7	How to keep motivated and engaged to continuously learn new skills.	2 hours
Risk-Taking Propensity		
Module 1	How to assess the level of business risk and its potential investments.	2 hours
Module 2	Importance of practicing wide-ranging acts in achieving firms' objectives.	2 hours
Module 3	Exploring the unknown and how it can lead to successful venturing.	2 hours
Module 4	Things to consider when making investing decisions.	2 hours
Module 5	Ways on how to manage and mitigate business risks.	2 hours
Proactiveness		
Module 1	Tips on how to deal with competitors.	2 hours
Module 2	Ways to keep ahead and handle competition in business.	2 hours
Module 3	Benefits of becoming the first mover in the business.	2 hours
Module 4	Ways on how to anticipate trends and its potential problems to ensure business success.	2 hours
Module 5	Tips on how to bring business to the next level.	2 hours
Module 6	Advantages of planning ahead in your business.	2 hours
Autonomy		
Module 1	Importance and added value of independent action of an	2 hours

	individual in the business.	
Module 2	Improving the ability and will to be self-directed to pursue novel ideas	2 hours
Module 3	Importance of supporting and improving autonomy in business.	2 hours
Module 4	Ways on how to stay positively motivated that starts from within.	2 hours
Module 5	Ways on how to practice autonomous activities to ensure business success.	2 hours

Evidence Of Success

To determine that the mobile application project is making progress, the following benchmarks will be measured:

- Increase the number of micro-enterprise business owners who participate and attend the webinar or panel discussion.
- Increase the number of micro-enterprise business owners who register on the self- assessment and completed the modular entrepreneurship program based on the identified competency gaps

Evaluation Process

To determine that the mobile application project goal is achieved, the following benchmarks will be measured:

- Increase the number of micro-enterprises utilizing the mobile app designed
- Increase the number of micro-enterprises years of operations to 10 years and above.

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